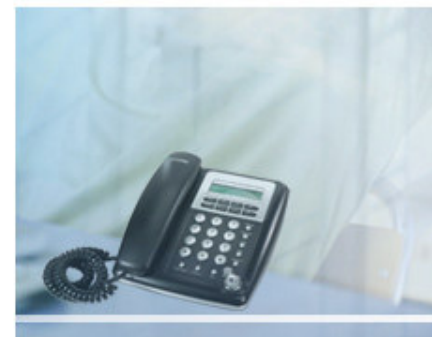
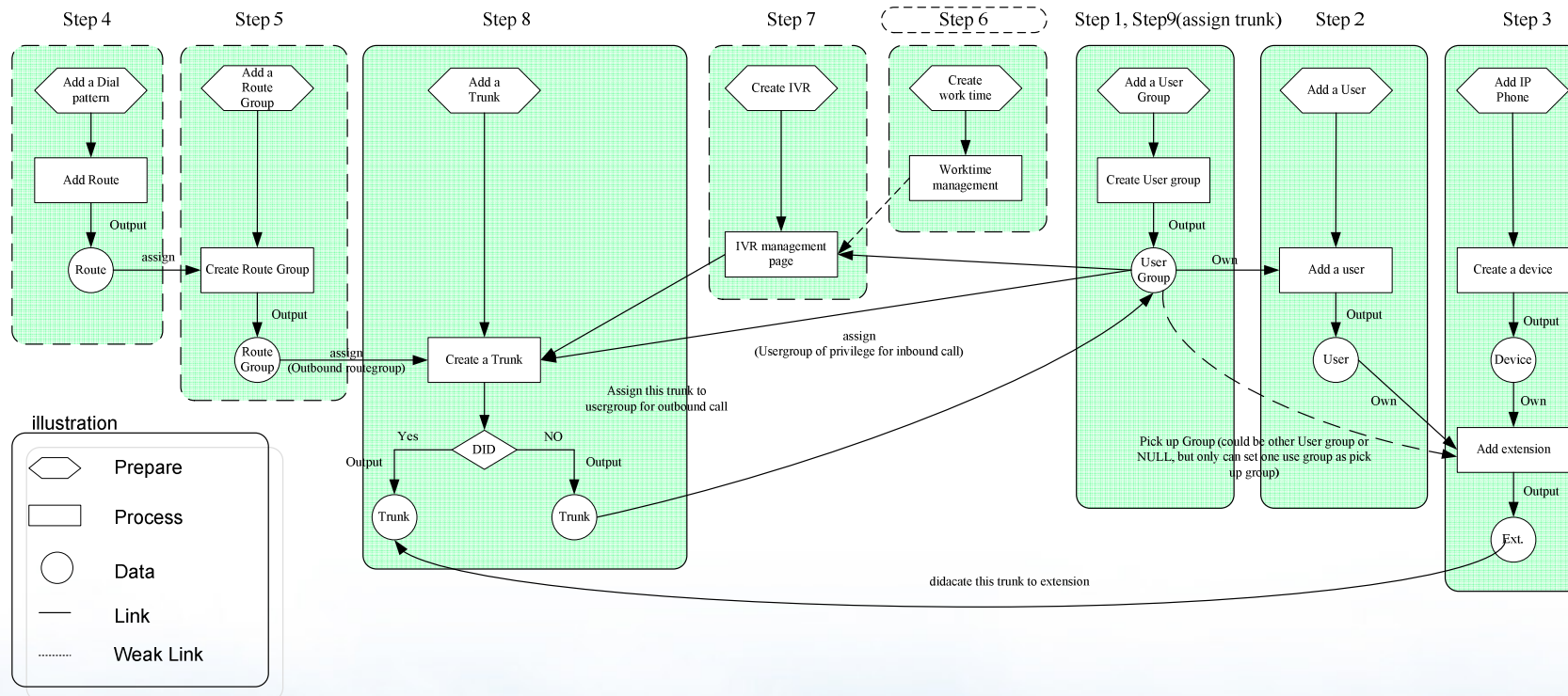


Internet Telephony PBX System

IPX-2000/1800 Series



Configuration flow for IP PBX



- **Setup the usergroup, user, and extensions of IP PBX**

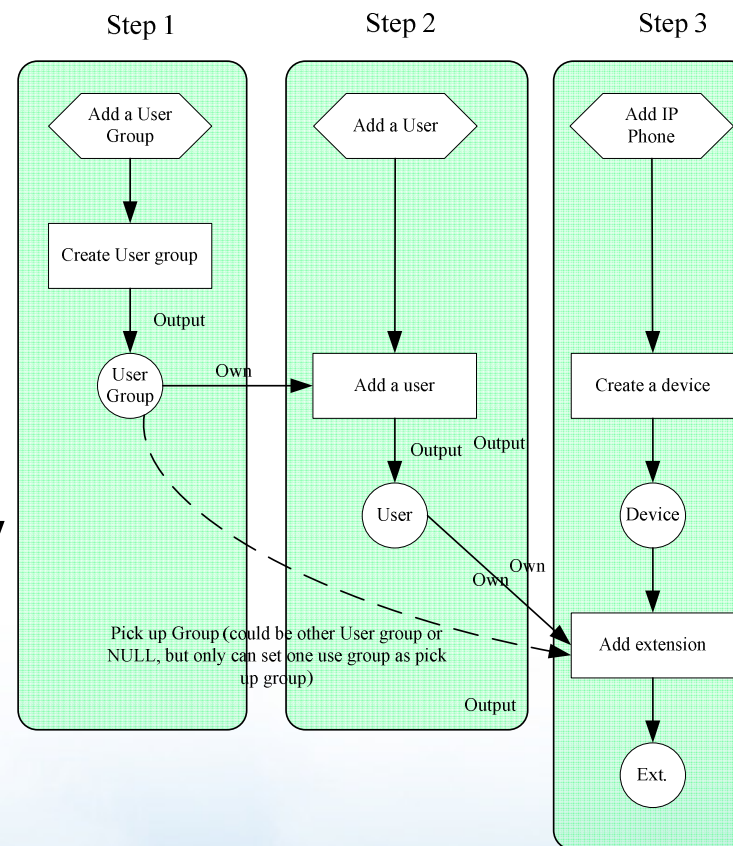
Step 1: Create User Group

Step 2: Create User

Step 3: Create Extension

Step 4: Reload the IP PBX

-Set up the IP Phone / ATA by **Auto Provision** or **Manually**.



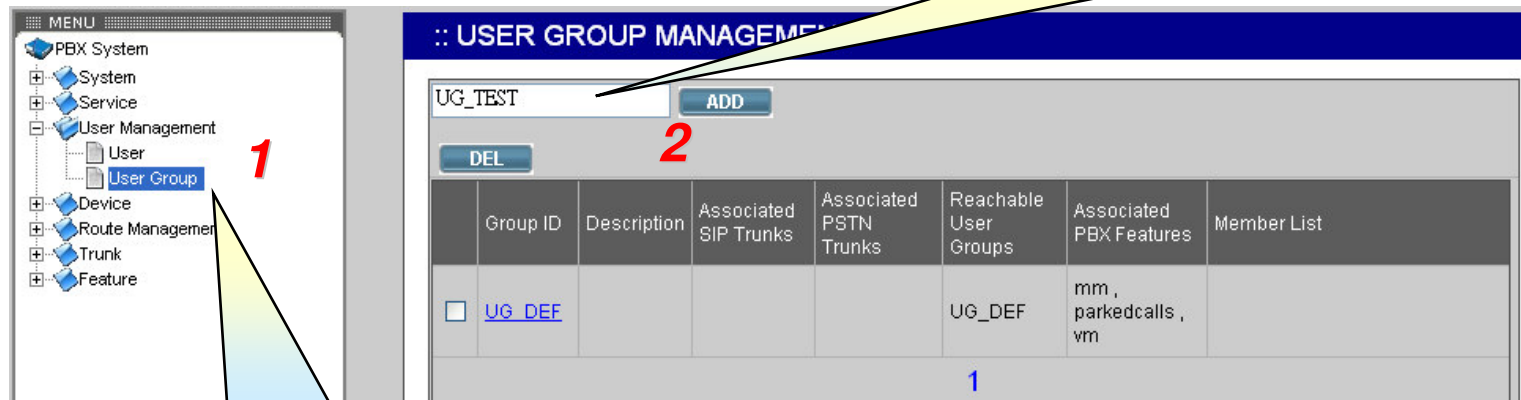
- **Auto provision**
 - An easy way to set an extension on IP phone or ATA.
 - Easy to maintain the IP phone or ATA
 - Need the IP Phone or ATA supports this feature.

- **The parameters should be collect in advance**
 - MAC address of the IP Phone or ATA
 - Vender ID of the PLANET IP Phone or ATA (ex. the vender ID of pla154t/pla156 is VIP-154T/ VIP-156) and the latest firmware for IP Phone currently is V2.0 or higher

- **Before perform the auto provision:**
 - Please make sure the IP Phone/ATA is able to obtain the IP address by DHCP.
 - Please factory default the IP Phone/ATA if it fails to get the configure file form our IP PBX.

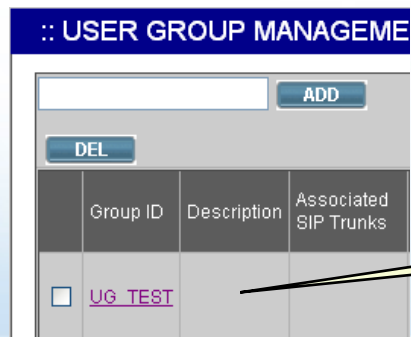
Step 1-1: Create User Group

Input the name of User Group you need then click the [Add].



Group ID	Description	Associated SIP Trunks	Associated PSTN Trunks	Reachable User Groups	Associated PBX Features	Member List
<input type="checkbox"/> UG_DEF				UG_DEF	mm, parkedcalls, vm	

Select the User Group option in the menu tree



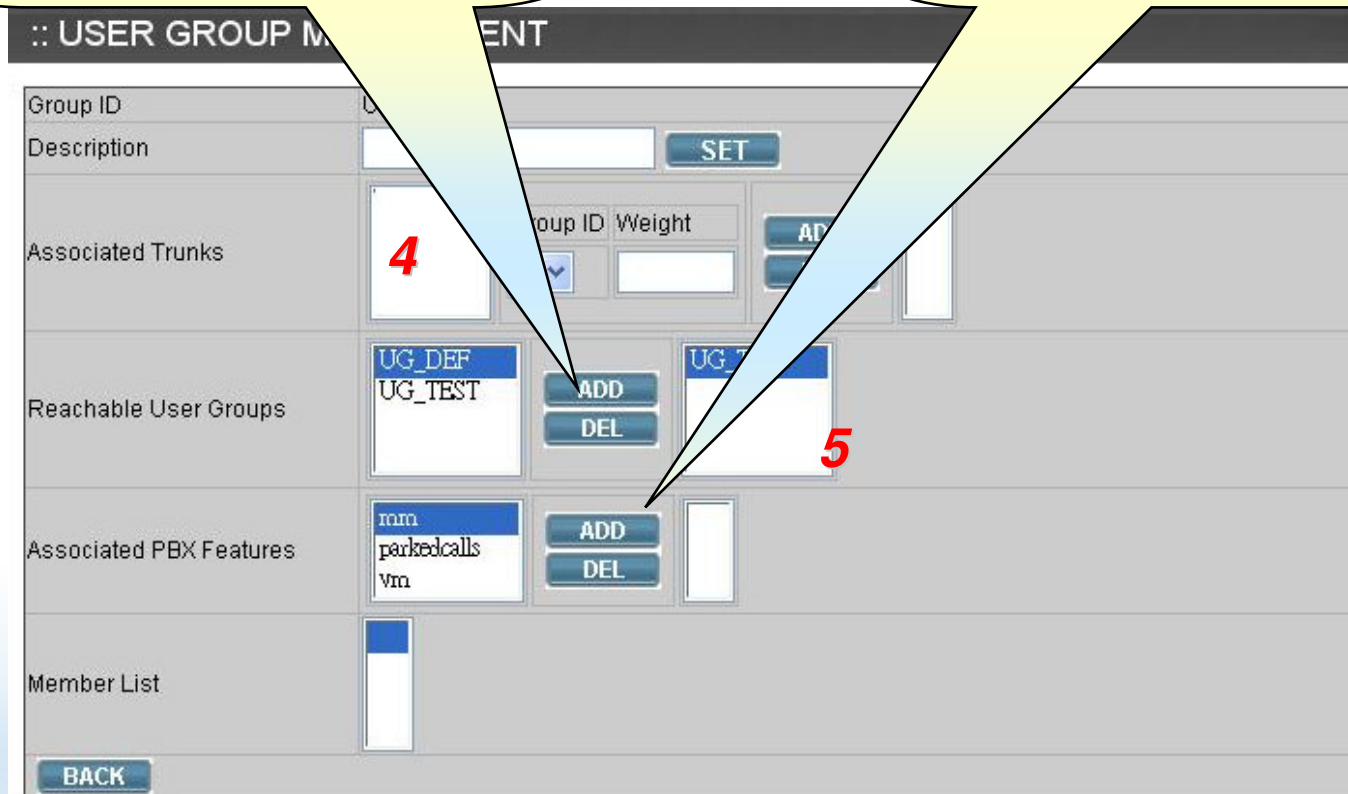
Group ID	Description	Associated SIP Trunks
<input type="checkbox"/> UG_TEST		

Click the new appear hyperlink for next step.

Step 1-2: Create User Group

Select the Reachable User Groups for the new created User Group. Click [Add] to activate.

Associate the PBX features for this user group, Click [Add] to activate. When done, click [Back] to finish the User Group setting.



The screenshot shows the configuration page for a user group. The fields and their contents are as follows:

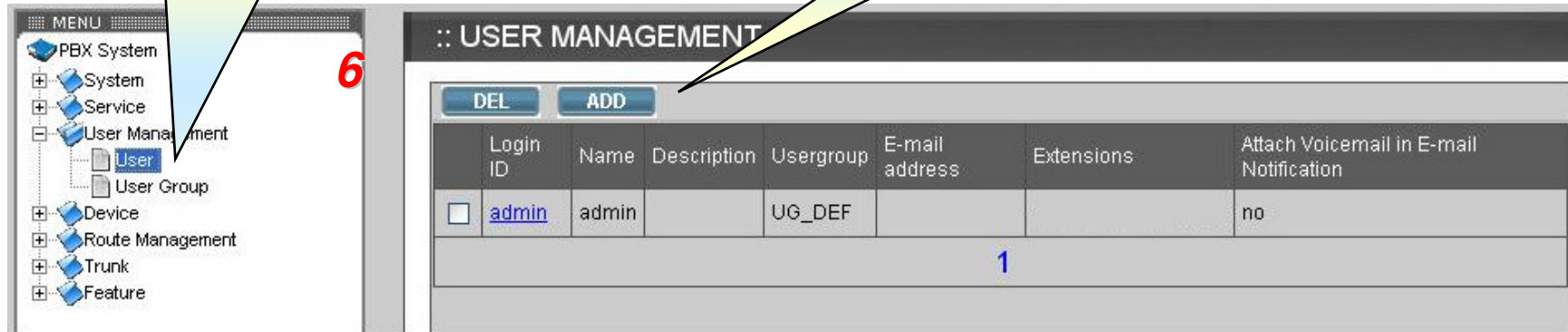
- Group ID:** [Empty field]
- Description:** [Empty field] with a [SET] button.
- Associated Trunks:** [Empty field] with a dropdown menu and a [ADD] button. A red number '4' is next to the dropdown.
- Reachable User Groups:** A list containing 'UG_DEF' and 'UG_TEST' with [ADD] and [DEL] buttons. A red number '5' is next to the [ADD] button.
- Associated PBX Features:** A list containing 'rnn', 'parkedcalls', and 'vm' with [ADD] and [DEL] buttons.
- Member List:** [Empty list]

A [BACK] button is located at the bottom left of the form.

Step 2-1: Create a User

Click the User option in the menu tree.

Click [ADD] to add a new user.



MENU

- PBX System
 - System
 - Service
 - User Management
 - User (6)
 - User Group
 - Device
 - Route Management
 - Trunk
 - Feature

:: USER MANAGEMENT

DEL ADD (7)

	Login ID	Name	Description	Usergroup	E-mail address	Extensions	Attach Voicemail in E-mail Notification
<input type="checkbox"/>	admin	admin		UG_DEF			no

1

Step 2-2: Create a User

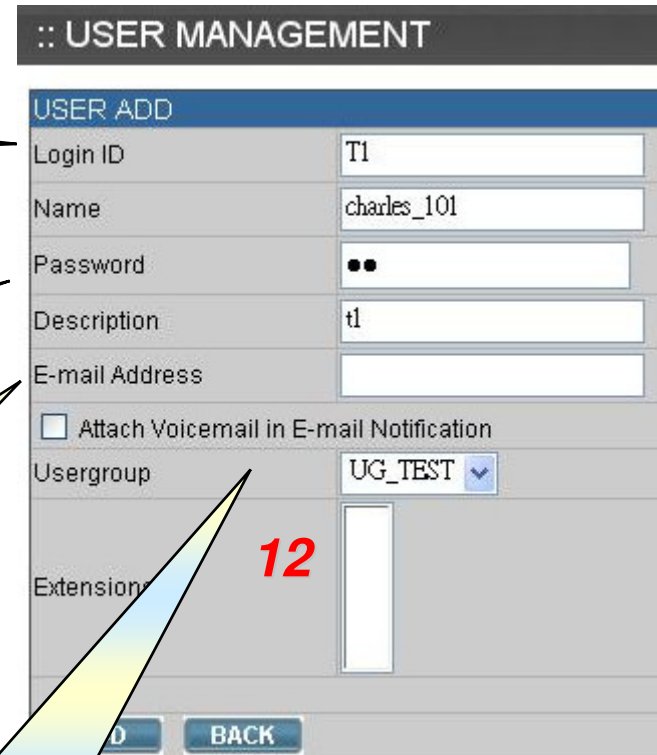
8 Create a login ID for user to login the configure web page.

9
10 Give a name of this user, this name will become the caller ID of this extension.

11 Set the password for user to login web page by this ID and give the description of this user.

12 Set the E-mail address of this user for sending the voicemail to user, if check the attach Voicemail in E-mail Notification option.

13 Assign the user to a User Group.



:: USER MANAGEMENT

USER ADD

Login ID	T1
Name	charles_101
Password	●●
Description	t1
E-mail Address	
<input type="checkbox"/> Attach Voicemail in E-mail Notification	
Usergroup	UG_TEST
Extension	

[ADD] [BACK]

13 Click [ADD] to save the setting and click [BACK] to return the previous page for adding another new user.

Step 3-1: Create an extension by auto provision

Click the IP Phone option in the menu tree.

Enter a unique ID for this device, when done click the [ADD].

Device ID	Device Administration URL
EIP7002_101	

Device ID	Associated Extension	Device Administration URL	Auto Client Conf
<input type="checkbox"/> EIP7002_101		<input type="text"/> <input type="button" value="LINK"/>	Disabled <input type="button" value="EDIT"/> <input type="button" value="APPLY"/>

16

Click [EDIT] to edit the auto provision configure of this device.

Step 3-2: Create an extension by auto provision
(The page is only for auto provision function)

:: ENABLE AUTOMATIC CLIENT CONFIGURATION MANAGEMENT

Enable Automatic Client Configuration

Device: EIP7002_101

Vendor Prefix: (a-zA-Z0-9_)

MAC Address:

Supplementary Configuration:

Codec Preference

1st codec:

1st packet time:

2nd codec:

2nd packet time:

3rd codec:

3rd packet time:

Enable Voice Activity Detection (VAD)

DTMF Mode:

17

Fill the Vendor Prefix of the IP Phone / ATA here.
e.g. VIP154T: **pla154t**; VIP156: **pla156**

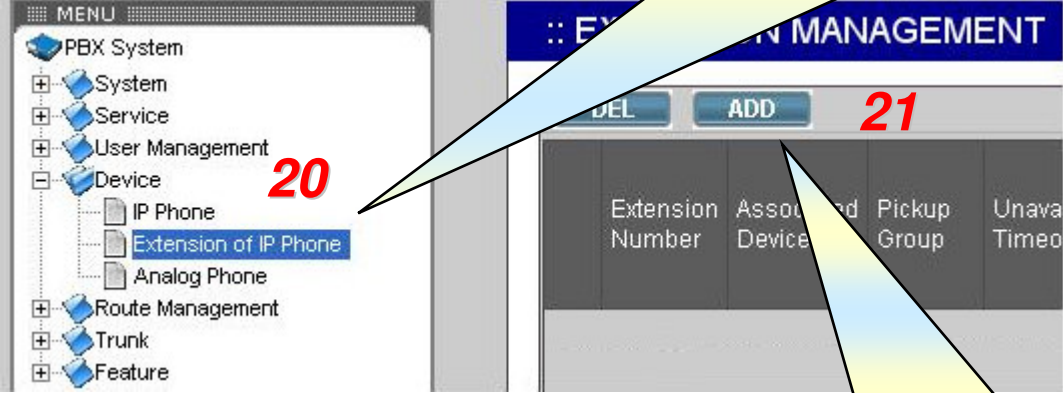
18

Fill the MAC address of the IP Phone / ATA.

19

Set the priority of IP Phone / ATA codec and the functions of the IP Phone / ATA, click [ENABLE] to enable the setting and click [BACK] to return previous page.

Step 3-3: Create an extension



Select the Extension of IP Phone to set up the information of extension.

Click [ADD] to add an extension.

20

21

Extension Number	Associated Device	Pickup Group	Unava Time
------------------	-------------------	--------------	------------

Step 3-4: Create an extension

EXTENSION MANAGEMENT

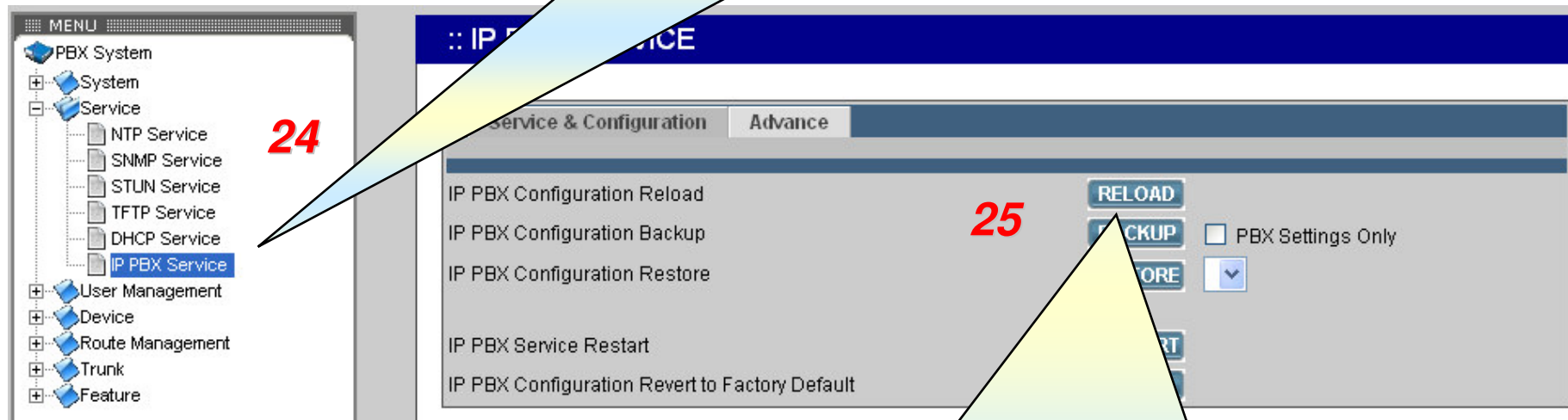
Extension Number	101
Associated Device	EIP7002_101
Password	•••
User	T1(101_charles)
Pickup Group	UG_TEST
Line Type	Wired
Language	English
Voicemail	Enable
Voicemail PIN	
Unavailable Timeout	10 sec.
<input type="checkbox"/> Allow LAN Use Only	
<input type="checkbox"/> Disable NAT Traversal	
Try Peer-to-peer RTP	NO
DTMF Mode	rfc2833
<input type="checkbox"/> Advanced Settings	

ADD BACK

Check Advanced setting for call forward function.

Step 4: Reload the IP PBX

Select the IP PBX service in the menu tree.



The screenshot displays the configuration interface for IP PBX. On the left, a 'MENU' tree is visible, with 'IP PBX Service' highlighted under the 'Service' category, marked with a red '24'. The main content area shows the 'IP PBX SERVICE' configuration page, with the 'Advance' tab selected. A list of actions is provided, including 'IP PBX Configuration Reload', 'IP PBX Configuration Backup', 'IP PBX Configuration Restore', 'IP PBX Service Restart', and 'IP PBX Configuration Revert to Factory Default'. The 'RELOAD' button is highlighted with a red '25'. Other buttons like 'BACKUP', 'RESTORE', and 'RESET' are also visible, along with a 'PBX Settings Only' checkbox and a dropdown menu.

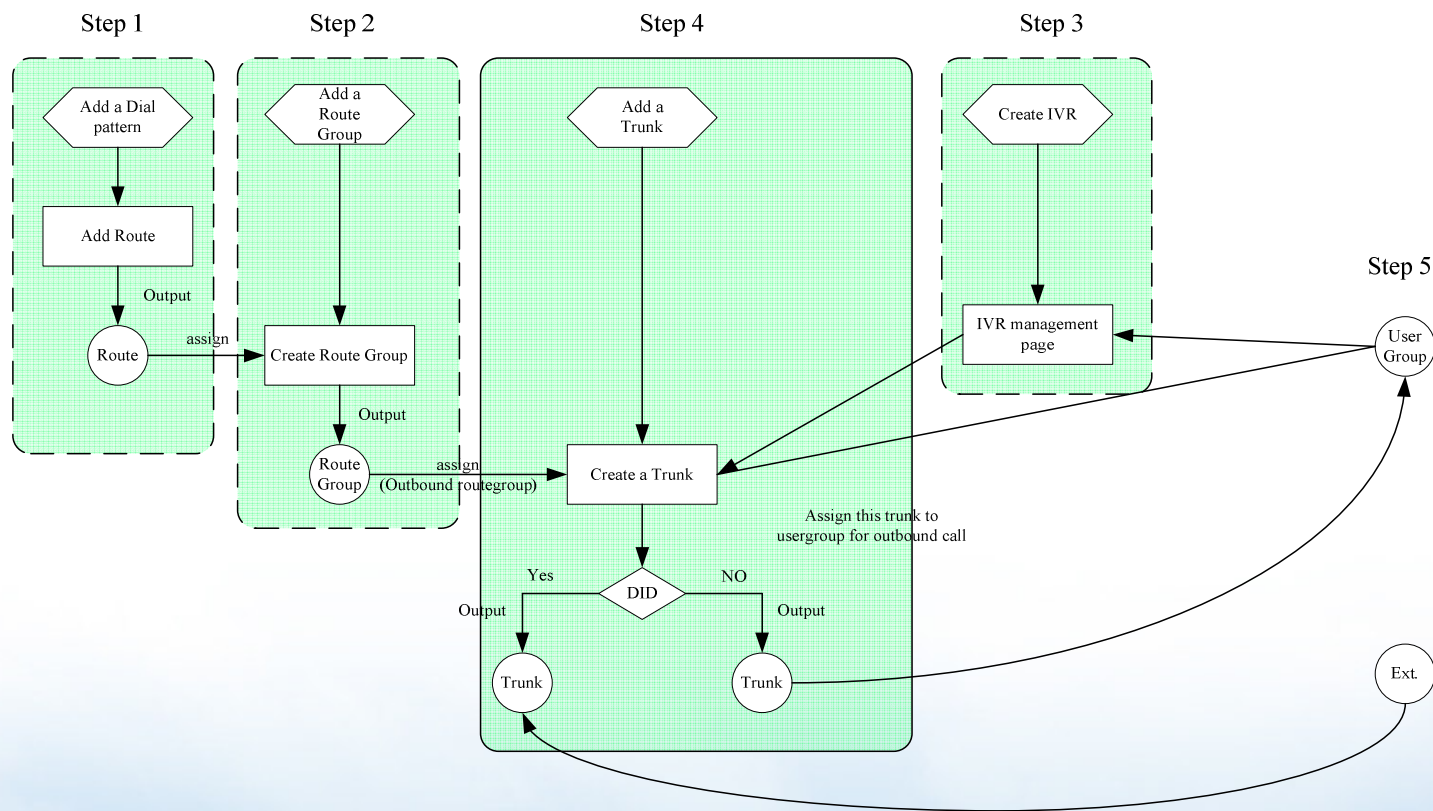
Click the [RELOAD] button to activate the setting.

For auto provision setting please factory default the IP Phone the IP Phone will download the configure file when boot up. For non-auto provision, please configure the SIP setting of the IP Phone then plug it on network , and then the IP Phone will register to the IP PBX.

- **Follow the steps above to create two extensions 101 and 102 on the IP PBX**
 - 101 call 102
 - Factory default the IP Phone (the auto provision function)
 - Change the name setting of the user management page, reload the IP PBX and 101 call 102 again. (Caller ID)
 - 101 dial 6666 enter voicemail system, 102 call 101(busy call back function)

- **Three types of trunk in the IP PBX**
 - SIP trunk
 - ✓ WAN/LAN port
 - ✓ Site to Site
 - ✓ Softswitch (ITSP)
 - ✓ Gateway
 - PSTN trunk
 - ✓ FXO interface
 - ✓ To telephony service provider
 - ✓ Legacy PBX (FXS interface)
 - ISDN trunk
 - ✓ ISDN BRI interface
 - ✓ To telephony service provider

- **Setup the Route, Route Group, IVR, Trunk, and assign the trunk to user group**

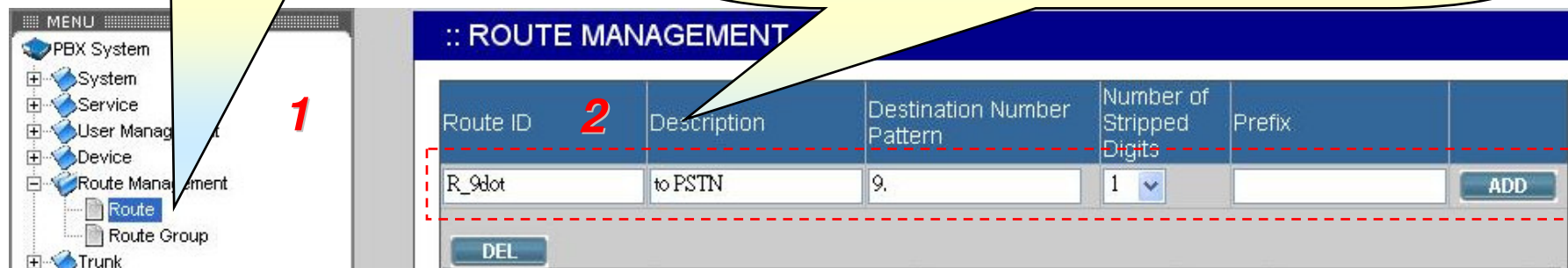


- **Step 1: Set Routes for dial plan**
 - Set the dial pattern for IP PBX to detect
- **Step 2: Set Route group to contain Routes**
 - Combine different dial patterns in a group
- **Step 3: Set IVR for incoming user**
 - Three layer IVR
- **Step 4: Set Trunks**
 - SIP trunk
 - PSTN trunk
- **Step 5: Assign the Trunks to User Groups**
 - Who can use the Trunk
- **Step 6: Reload the IP PBX**
 - Do not forget to reload IP PBX to take affect

Step 1: Create Routes

Select the Route option in the menu tree.

Input the dial pattern in the Route set up field, for detail please check the admin guide, When Done Click the [ADD].



	Route ID	Description	Destination Number Pattern	Number of Stripped Digits	Prefix
<input type="checkbox"/>	R_200	Site to Site	200	0	
<input type="checkbox"/>	R_200_dot	Site to Site to IVR	200*.	4	
<input type="checkbox"/>	R_9dot	to PSTN	9.	1	

3

Repeat the steps above to set three routes in the Route set up page.

Step 2-1: Create Route Group

Select the Route Group option in the menu tree.

Input the name of Route Group here, when done click [ADD] to create this Route group.

The screenshot shows the PBX system menu tree on the left with 'Route Group' selected, marked with a red '4'. On the right is the 'ROUTE GROUP MANAGEMENT' page where 'RG_othersite' is entered in the text field and the 'ADD' button is highlighted with a red '5'.

ROUTE GROUP MANAGEMENT	
RG_othersite	ADD
DEL	5
Group ID	
<input type="checkbox"/>	RG_DEF
<input type="checkbox"/>	RG_PSTN
<input type="checkbox"/>	RG_othersite

The created Route group shows here, click the hyperlink to modify the setting of each Route Group.

The screenshot shows the 'ROUTE GROUP ADD' configuration page. The 'Group ID' is 'RG_PSTN'. The 'Associated Routes' list contains 'R_200', 'R_200_dot', and 'R_9dot'. The 'R_9dot' entry is highlighted in blue. A red dashed box highlights the 'Description' field and the 'Associated Routes' list. A red '6' is placed next to the screenshot.

ROUTE GROUP ADD							
Group ID	RG_PSTN						
Description	<input type="text"/> SET						
Associated Routes	<table border="1"> <tr> <td>R_200</td> <td>R_9dot</td> </tr> <tr> <td>R_200_dot</td> <td></td> </tr> <tr> <td>R_9dot</td> <td></td> </tr> </table>	R_200	R_9dot	R_200_dot		R_9dot	
R_200	R_9dot						
R_200_dot							
R_9dot							
<input type="button" value="ADD"/> <input type="button" value="DEL"/>							
<input type="button" value="BACK"/>							

Create a Route Group for those calls goes to PSTN trunk by prefix with 9

Step 2-2: Create Route Group

:: ROUTEGROUP MANAGEMENT

ROUTE GROUP ADD

Group ID: RG_othersite

Description: SET

Associated Routes:

R_200	R_200
R_200_dot	R_200_dot
R_9dot	

ADD
DEL

BACK

8

Create a Route Group for those calls goes to other IP PBX by SIP trunk 200, there are two dial patterns.
 Extension dial 200 to enter the IVR
 Extension dial 200*[ext.] to ring the ext. directly.

Digit Set and Wildcard Characters for Route Patterns

Expression	Description
[<digits>]	Match any single digit listed explicitly. E.g., digit set [13579] match odd digits. One may use '-' to indicate a range of digits, e.g. [2-8].
.(dot)	Match any digit in any length. Usually given in the end of a pattern to include all numbers matched a specific prefix. ☞ .(dot) can not be used alone or at the beginning of the route patterns.
X	Match any single digit from 0 to 9.
Z	Match any single digit from 1 to 9.
N	Match any single digit from 2 to 9.

Step 3-1: Create IVR

9

IVR MANAGEMENT

IVR Management | IVR Prompts Management | IVR Parameters

All IVR Menu [v]

Info: [APPLY] [CLEAR] [DEL]

Rule Action Setup

IVR Name [] [ADD]

Rule Key [0] [v] [ADD]
Action [v]

Child Rule Key [0] [v] [ADD]
Action [v]

Select the IVR option in the menu tree to set up the IVR.

10

Info: [APPLY] [CLEAR] [DEL]

Rule Action Setup

IVR Name def [ADD]

Rule Key [0] [v] [ADD]
Action [v]

Node [v] [DEL]

Child Rule Key [0] [v] [ADD]
Action [v]

Action Data

Prompt [%agent-newlocation.gsm] [v]

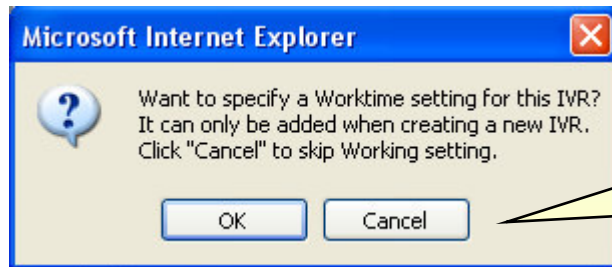
Group UG_TEST [v]

Language English [v]

Extension []

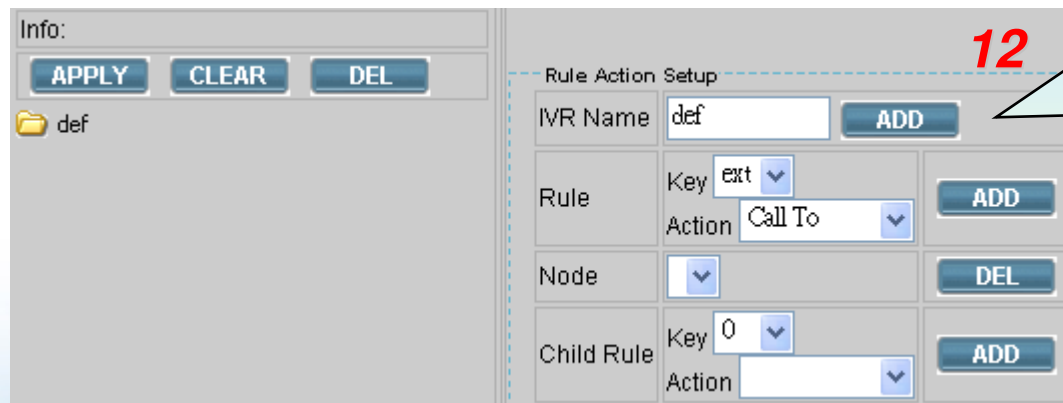
Set the IVR Name, Prompt, Group, Language as show on the picture first, when done click this [ADD] to apply the setting.

Step 3-2: Create IVR



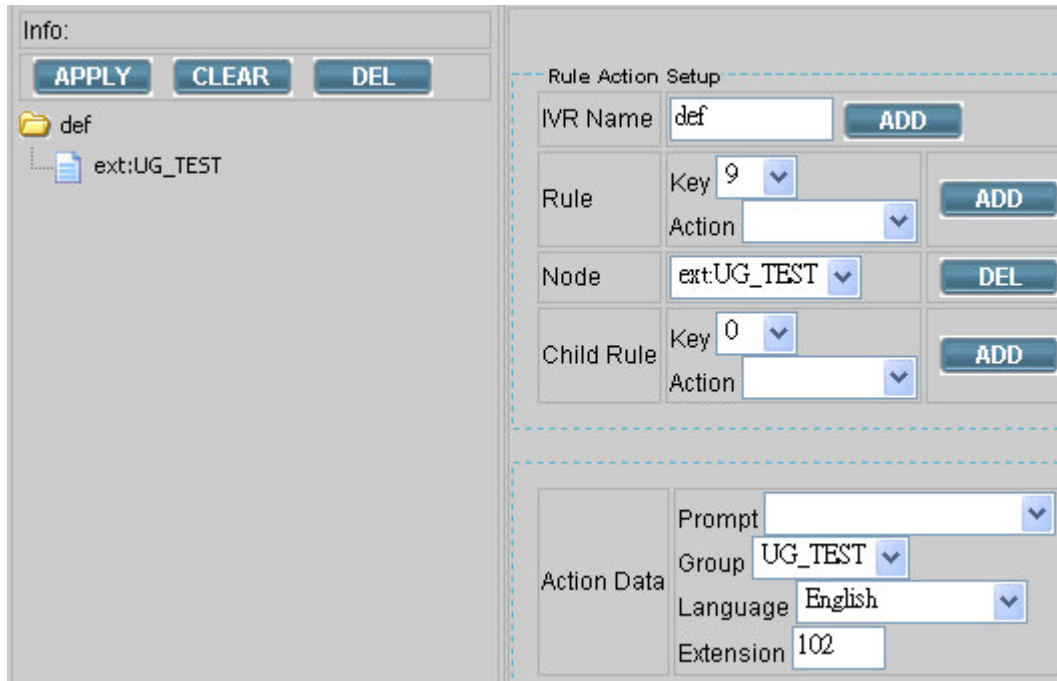
11

A pop up window will ask you, do you want to implement the work time setting in this IVR, in this case click [Cancel] to disable the work time option in this IVR.



Create a IVR option, in this case is when caller enter callee's **ext** number, the IP PBX will **call to** the callee, when done click this [ADD] to apply the setting.

Step 3-3: Create IVR



Info:

APPLY CLEAR DEL

def

ext:UG_TEST

Rule Action Setup

IVR Name def ADD

Rule Key 9 ADD

Action

Node ext:UG_TEST DEL

Child Rule Key 0 ADD

Action Data

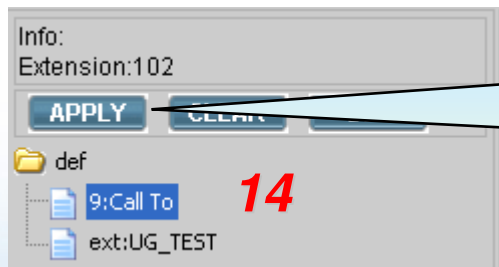
Prompt

Group UG_TEST

Language English

Extension 102

Then we add the IVR pattern which is when caller enter "9", the call will be transfer to the extension **102** , click this [ADD] to apply the setting.



Info:

Extension:102

APPLY CLEAR DEL

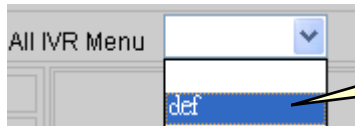
def

9:Call To

ext:UG_TEST

You can check the IVR you created in tree structure on the left side, when done click the [APPLY] button to apply the IVR setting.

Step 3-4: Create IVR



15

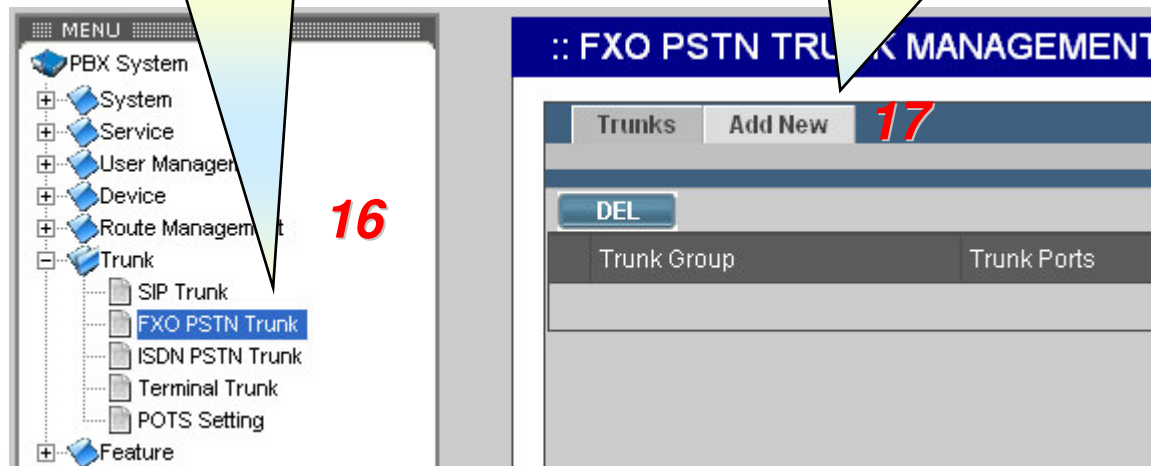
You can check the existed IVR in this drop down menu.

Field	Description														
All IVR Menus	Select a preferred IVR menu name.														
Info	View the IVR menu as a tree view.														
IVR Name	Specify the name of the IVR.														
Rule	Click a number in the Keypad list and one of the following actions in the Action list to associate an action with a key.														
	<table border="1"> <tr> <td>Hang Up</td> <td>To cut off the call immediately.</td> </tr> <tr> <td>Play Back</td> <td>To play the IVR prompt selected in Prompt list</td> </tr> <tr> <td>Call To</td> <td>To call an extension.</td> </tr> <tr> <td>Go to Top</td> <td>To go back to the root menu of the IVR.</td> </tr> <tr> <td>Next Layer</td> <td>To go to the next layer of the IVR menu.</td> </tr> <tr> <td>Select Language</td> <td>To choose a language.</td> </tr> <tr> <td>Return</td> <td>To go back to the previous layer.</td> </tr> </table>	Hang Up	To cut off the call immediately.	Play Back	To play the IVR prompt selected in Prompt list	Call To	To call an extension.	Go to Top	To go back to the root menu of the IVR.	Next Layer	To go to the next layer of the IVR menu.	Select Language	To choose a language.	Return	To go back to the previous layer.
Hang Up	To cut off the call immediately.														
Play Back	To play the IVR prompt selected in Prompt list														
Call To	To call an extension.														
Go to Top	To go back to the root menu of the IVR.														
Next Layer	To go to the next layer of the IVR menu.														
Select Language	To choose a language.														
Return	To go back to the previous layer.														

Step 4-1: Set Trunks (PSTN trunk)

Select the PSTN trunk option in the menu tree.

Click [Add New] tag to add a new PSTN trunk.



The screenshot displays the configuration interface for a PBX system. On the left, a menu tree is visible under the heading 'MENU'. The tree includes categories like 'PBX System', 'System', 'Service', 'User Management', 'Device', 'Route Management', 'Trunk', and 'Feature'. Under the 'Trunk' category, several options are listed: 'SIP Trunk', 'FXO PSTN Trunk' (which is highlighted in blue), 'ISDN PSTN Trunk', 'Terminal Trunk', and 'POTS Setting'. A red number '16' is overlaid on the menu tree. On the right, the 'FXO PSTN TRUNK MANAGEMENT' page is shown. It features a 'Trunks' tab and an 'Add New' button with a red number '17' next to it. Below the button is a 'DEL' button and a table with columns for 'Trunk Group' and 'Trunk Ports'.

Step 4-2: Set Trunks (PSTN trunk)

:: FXO PSTN TRUNK MANAGEMENT

Trunks	Add New
Trunk Group	1
Trunk Ports	1-4
Description	PSTN trunk
Port Selection	Asc & Not Rotating
<input checked="" type="checkbox"/> Caller ID Detection	
<input type="checkbox"/> Answering by Battery Reversal Detection	
Outbound Routegroup	RG_PSTN
DID of Extension	
Language	English
IVR List	def
Usergroup of Privilege	UG_TEST
<input type="checkbox"/> Advanced Settings	

18

Follow the setting to set up the PSTN trunk, when done click the [ADD] below:

Step 4-3: Set Trunks (PSTN trunk)

:: FXO PSTN TRUNK MANAGEMENT

Trunks

	Trunk Group	Trunk Ports	Description	>> More
<input type="checkbox"/>	1	<input type="text" value="1-4"/>	<input type="text" value="PSTN Trunk"/>	

1

19


The new added PSTN trunk show like this, if you want to modify the setting, click the [More] button on up-right side, when done click [Apply] on right side.

Step 4-4: Set Trunks (SIP trunk by using Dynamic peer)

Select the SIP trunk option in the menu tree.

20

Check the [Dynamic Peer] option, set the Trunk ID, Auth name, auth. Password, Outbound Route group, Language, IVR list, User group of privilege, then click the [ADD] button and done.



SIP TRUNK MANAGEMENT	
Trunks Add New	
Trunk Identifier	200
Description	
<input checked="" type="checkbox"/> Dynamic Peer	21
Auth. Name	200
Auth. Password	...
<input checked="" type="checkbox"/> Registration Required	
Outbound Routegroup	RG_othersite
DID of Extension	
DID Prefix	
DID Stripping	
Language	English
IVR List	def

Step 4-6: Set Trunks (SIP trunk by using Dynamic peer)

The new added SIP trunk show like this, if you want to modify the setting, click the [More] button on up-right side, when done click [Apply] on right side.

:: SIP TRUNK MANAGE 22

Trunks

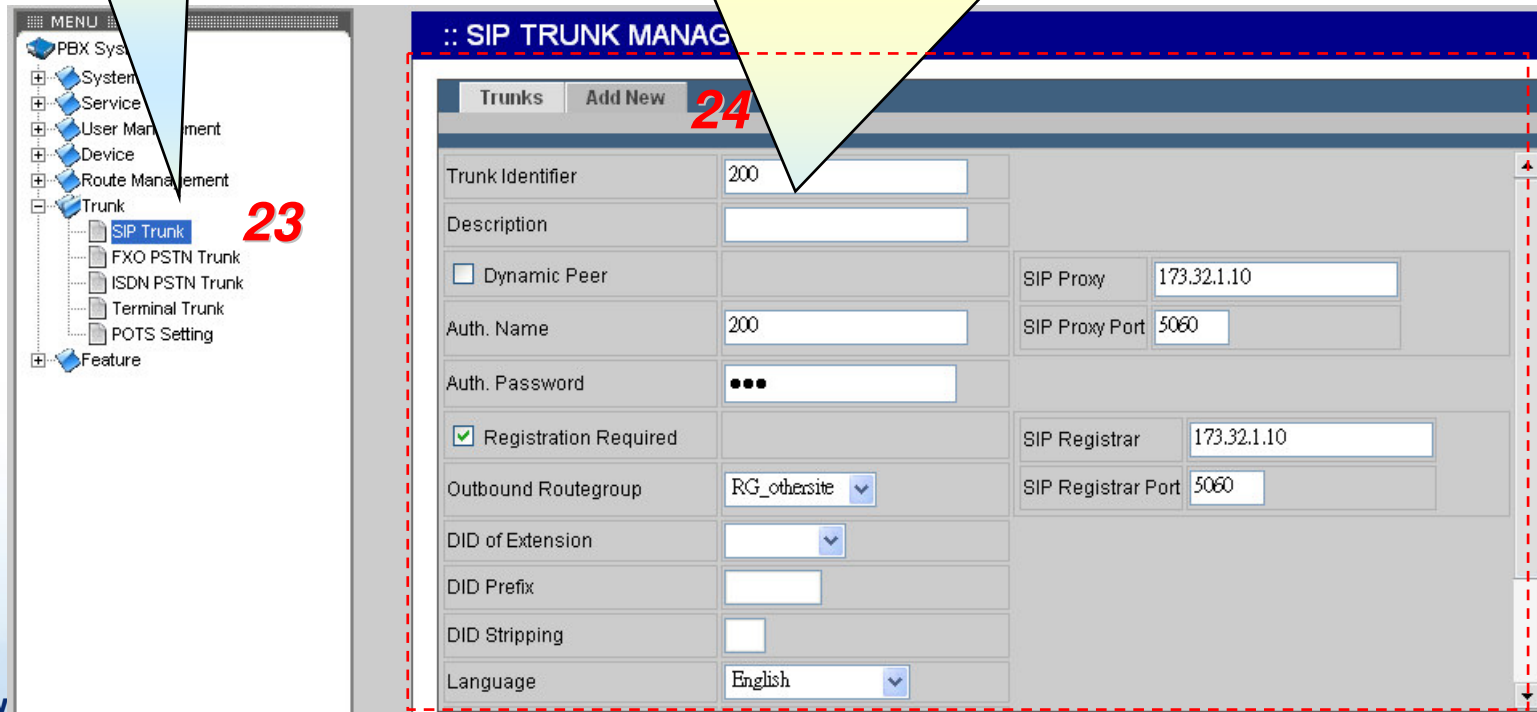
	Trunk Identifier	Description	>> More
<input type="checkbox"/>	200	<input type="text"/>	

1

Step 4-5: Set Trunks (SIP trunk Static peer)

Select the SIP trunk option in the menu tree.

Do not Check the [Dynamic Peer] option, set the Trunk ID, Auth name, auth. Password, SIP proxy/Registrar, Port of SIP proxy/Registrar Outbound Route group, Language, IVR list, User group of privilege, then click the [ADD] button and done.



The screenshot displays the 'SIP TRUNK MANAG' interface. On the left, a menu tree is shown with 'SIP Trunk' selected, marked with a red '23'. The main area shows the configuration form for a new trunk, with the 'Add New' button highlighted by a red '24'. The form includes the following fields:

Trunk Identifier	200	SIP Proxy	173.32.1.10
Description		SIP Proxy Port	5060
<input type="checkbox"/> Dynamic Peer		SIP Registrar	173.32.1.10
Auth. Name	200	SIP Registrar Port	5060
Auth. Password	...		
<input checked="" type="checkbox"/> Registration Required			
Outbound Routegroup	RG_othersite		
DID of Extension			
DID Prefix			
DID Stripping			
Language	English		

Set Trunks (SIP trunk Static peer)

The new added SIP trunk show like this, if you want to modify the setting, click the [More] button on up-right side, when done click [Apply] on right side.

:: SIP TRUNK MANA 25

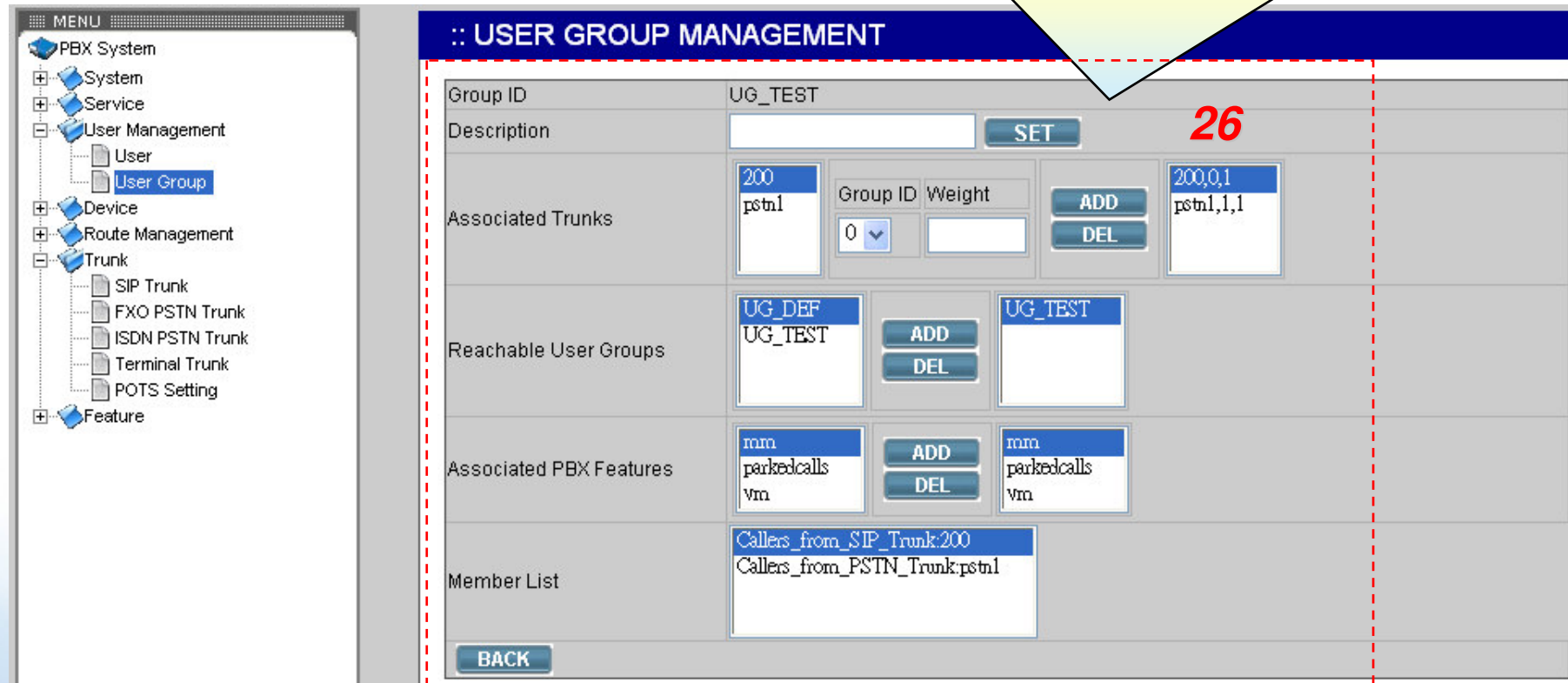
Trunks

	Trunk Identifier	Description	>> More
<input type="checkbox"/>	200	<input type="text"/>	

1

Step 5: Assign the Trunks to the User Group

Go to the User Group Management page, assign the trunks to the user group, if you want to apply the trunk load balance function, just give the group ID and Weight, in this case just omit it. Click Add to apply the setting.



USER GROUP MANAGEMENT

Group ID: UG_TEST

Description: [] SET **26**

Associated Trunks: 200 pstnl | Group ID: 0 | Weight: [] | ADD | DEL | 200,0,1 pstnl,1,1

Reachable User Groups: UG_DEF | ADD | DEL | UG_TEST

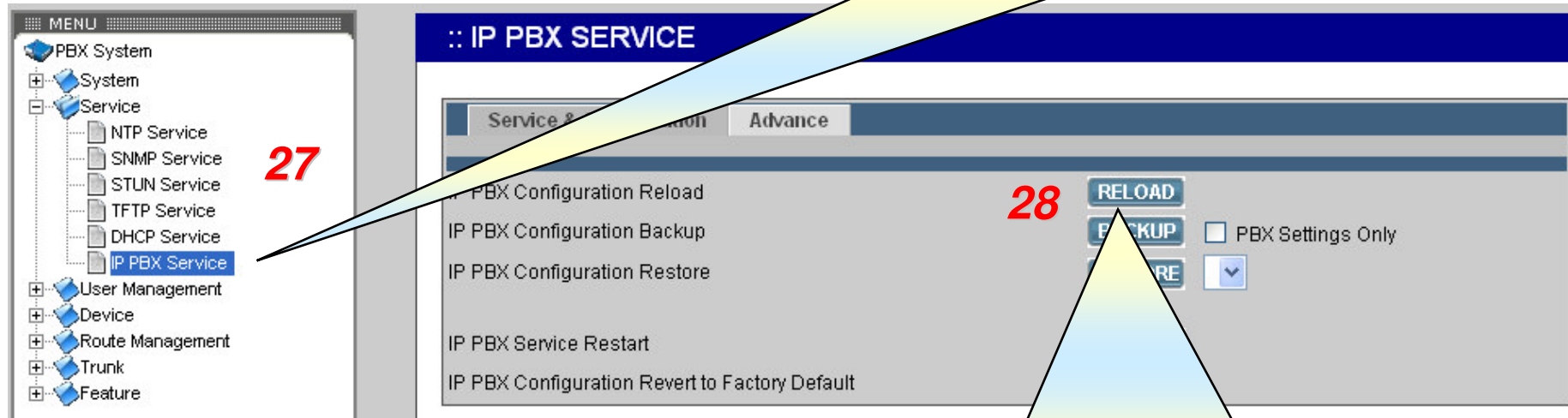
Associated PBX Features: mm, parkedcalls, vm | ADD | DEL | mm, parkedcalls, vm

Member List: Callers_from_SIP_Trunk:200, Callers_from_PSTN_Trunk:pstnl

BACK

Step 6: Reload the IP PBX

Select the IP PBX service in the menu tree.



The screenshot displays the configuration interface for IP PBX. On the left, a 'MENU' tree shows the 'IP PBX Service' option selected, indicated by a red '27'. The main area is titled 'IP PBX SERVICE' and contains a list of configuration options. The 'RELOAD' button is highlighted with a red '28'. Other options include 'IP PBX Configuration Reload', 'IP PBX Configuration Backup', 'IP PBX Configuration Restore', 'IP PBX Service Restart', and 'IP PBX Configuration Revert to Factory Default'. A 'PBX Settings Only' checkbox and a dropdown menu are also visible.

Click the [RELOAD] button to activate the setting.

ACTIVATING IP POWER

